



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,031	03/26/2001	Rabah Arhab	1200.465	3435

7590

05/08/2002

Longacre & White
6550 Rock Spring Drive Suite 240
Bethesda, MD 20817

EXAMINER

BURCH, MELODY M

ART UNIT

PAPER NUMBER

3683

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,031

Applicant(s)

ARHAB ET AL.

Examiner

Melody M. Burch

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "14" has been used to designate both impulse wheel and and hub, reference character "12" has been used to designate both turbine and impulse wheel, reference character "41" has been used to designate both ring and spring. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: elements: 464, 363, 459, and element number 766 specifically in figure 23 is cut off. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: element 1068. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Art Unit: 3683

4. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect can be deferred until the application is allowed by the examiner.

Specification

5. The disclosure is objected to because of the following informalities: the disclosure fails to include the appropriate headings particular to US Patent format.

Appropriate correction is required.

Claim Objections

6. Claims are objected to because of the following informalities: parentheses such as "(61, 166...)" as shown in claim 2 line 3 should include all appropriate numbers or should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claims 1 and 26. The phrase "especially for a motor vehicle" in line 1 is

Art Unit: 3683

indefinite. It is unclear to the Examiner whether or not the apparatus is, in fact, for a motor vehicle.

Re: claim 1. The phrase "adapted to be coupled in rotation to a driving shaft, a turbine wheel..." in lines 2-3 is indefinite. It is unclear whether the "turbine wheel" is a component to which the transverse wall is coupled.

Re: claim 1. The phrase "an element" in line 3 from the bottom of the claim is indefinite. It is unclear to the Examiner as to the exact element Applicant is referring to.

Re: claim 2. It is unclear to the Examiner whether "elements" in line 2 from the bottom of the claim is intended to be the same or different from the "at least one projecting element" claimed in lines 2-3.

Re: claim 9. It is unclear to the Examiner whether the "at least one rivet" is intended to be the same or different from the "rivet means" claimed in line 2 of claim 8.

Re: claims 10 -12. Claims 10-12 recite the limitation "the rivet" in line 2 and "the head of the rivet" particularly in claim 12. There is insufficient antecedent basis for this limitation in the claim.

Re: claim 10. The phrase "carried one the piston" in line 2 is unclear.

Re: claim 13. Claim 13 recites the limitation "the hole" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Re: claims 17 and 26. The phrases "may be" and "such as" in lines 1 and 2 from the bottom of claim 17 and "may be" in line 4 from the bottom of claim 26 are indefinite as they fail to define the metes and bounds of the claim.

Re: claim 19. The phrase "a hole" is indefinite. It is unclear whether the "hole" of claim 19 is intended to be the same or different from that of claim 2.

Re: claim 26. It is unclear whether the "at least one rivet" in the last line of the claim intended to be the same or different from the "a rivet" claimed in line 3 from the bottom of the claim.

Re: claim 35. The phrase "bayonet-type" in the last line of the claim is indefinite as it fails to define the metes and bounds of the claim.

The claims are replete with 112 issues. The above list include examples of the issues and is not meant to be exhaustive.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 2, 5, 8, 9, 10, 11, 20 and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5377796 to Friedmann et al.

Re: claims 1, 2, 5 and 20. Friedmann et al. show in figure 8 a hydrokinetic coupling apparatus for a motor vehicle comprising a casing as labeled by Examiner in attached copy of figure 8 having a transverse wall as labeled and adapted to be coupled in rotation to a driving shaft, a turbine wheel 413 mounted within the casing and fixed to a hub 414,450 which is adapted to be coupled in rotation to a driven shaft, a fixed first surface as labeled on the transverse wall of the casing, and a lock-up clutch as shown

Art Unit: 3683

interposed between the turbine wheel and the transverse wall and comprising a piston 435 carrying a second surface as labeled which lies facing the first surface capable of coupling it releasably to the transverse wall as the piston reciprocates axially, wherein a friction means 449 acts between a face of the piston as labeled opposed to the second surface and an element situated in facing relationship, characterized in that the piston is so configured as to carry the friction means as shown via element 451.

Re: claims 8, 9, 10, and 11. Friedmann et al. show rivet means 451 interposed between the friction means and the piston.

Re: claims 26, 27, and 28. Friedmann et al. show in figure 8 a hydrokinetic coupling apparatus for a motor vehicle comprising a casing as labeled by Examiner in attached copy of figure 8 having a transverse wall as labeled and adapted to be coupled in rotation to a driving shaft, a turbine wheel 413 mounted within the casing and fixed to a hub 414,450 which is adapted to be coupled in rotation to a driven shaft, a fixed first surface as labeled on the transverse wall of the casing, and a lock-up clutch as shown interposed between the turbine wheel and the transverse wall and comprising a piston 435 carrying a second surface as labeled which lies facing the first surface capable of coupling it releasably to the transverse wall as the piston reciprocates axially, wherein the turbine wheel 413 includes an annular ring 413a which may be of divided form as best understood and which is fixed to the hub by means of a rivet 436a, and wherein a friction means 449 acts between the hub and the piston, characterized in that the piston is so configured as to carry the friction means as shown via element 451.

Art Unit: 3683

11. Claims 1, 2, 5, 8, 9, 10, 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by WIPO 99/10663.

Re: claims 1, 5, 26, 27, 28, 29 and 30. WIPO 99/10663 shows in figure 7 a hydrokinetic coupling apparatus for a motor vehicle comprising a casing 401 having a transverse wall as shown and adapted to be coupled in rotation to a driving shaft, a turbine wheel 402 mounted within the casing and fixed to a hub 408 which is adapted to be coupled in rotation to a driven shaft, a fixed first surface shown in the area of element number 431 on the transverse wall of the casing, and a lock-up clutch as shown interposed between the turbine wheel and the transverse wall and comprising a piston 403 carrying a second surface shown in the area of element number 426 which lies facing the first surface capable of coupling it releasably to the transverse wall via elements 430 and 431 as the piston reciprocates axially, wherein a friction means 421,424 acts between a face of the piston opposed to the second surface and an element 430 situated in facing relationship, characterized in that the piston is so configured as to carry the friction means as shown.

Re: claim 2. WIPO 99/10663 shows the friction means or the piston has at least one projecting element 422 engaged in a complementary hole in the area of element number 422 on element 423 of the other one of the elements consisting of the piston and friction means.

Re: claims 8, 9, and 10. WIPO 99/10663 shows the limitation of a rivet means 422.

Art Unit: 3683

12. Claims 1 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4177885 to Ross.

Re: claims 1. Ross shows in the figure a hydrokinetic coupling apparatus for a motor vehicle comprising a casing 10,12 having a transverse wall 10 and adapted to be coupled in rotation to a driving shaft, a turbine wheel 18 mounted within the casing and fixed to a hub 34 which is adapted to be coupled in rotation to a driven shaft, a fixed first surface shown in the area of element number 70 on the transverse wall of the casing, and a lock-up clutch as shown interposed between the turbine wheel and the transverse wall and comprising a piston 44 carrying a second surface shown in the area of element number 74 which lies facing the first surface capable of coupling it releasably to the transverse wall via elements 60 and 72 as the piston reciprocates axially, wherein a friction means 92 acts between a face of the piston opposed to the second surface shown on piston 44 to the right of element 92 and an element situated in facing relationship, characterized in that the piston is so configured as to carry the friction means as shown.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 3, 4, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedmann et al. in view of US Patent 4177885 to Ross.

Re: claims 3 and 12. Ross teaches in the figure the use of a friction means 92 or a piston 44 having at least one projecting element (the end of element 92) being engaged in a complementary hole of the other one of the elements consisting of the piston and the friction means wherein the hole is blind. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the hole of the friction means to have been blind, in view of the teachings of Ross, in order to provide an alternate means of securing the friction means to the piston that requires less drilling.

Re: claims 4 and 14. Friedmann et al., as modified, teaches a blind hole to the same extent as Applicant. The references are silent to the way in which the blind hole is formed, nevertheless, the patentability of this product-by-process claim is based on the product itself. Furthermore, since press-forming, drilling and extruding are old and well-known methods of producing holes, burden shifts to Applicant to show an unobvious difference that would result from the claimed processes. See MPEP 2113.

15. Claims 6, 7, 29, 30, 31, 32, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedmann et al.

Re: claims 6 and 7. Friedmann et al. show the through hole having an unspecified shape. Examiner maintains that It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shape of the hole to any appropriate size so as to be properly engageable with the at least one

Art Unit: 3683

projecting element of the friction means or the piston. See *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Re: claims 29 and 30. *Friedmann et al.* show the thickened portion having a tapered width. Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shape of the thickened portion to any appropriate shape including a constant width so as to be properly engageable with the friction means. See *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Re: claims 31, 32, 35. The reference is silent to the way in which the friction means is connected to the thickened portion, nevertheless, the patentability of this product-by-process claim is based on the product itself. Furthermore, since molding and snap-fitting are an old and well-known methods of producing a connection, burden shifts to Applicant to show an unobvious difference that would result from the claimed processes. See MPEP 2113.

16. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Friedmann et al.* in view of US Patent 4844222 to *Casse et al.* *Casse et al.* teaches the use of a washer or friction means 37 made of synthetic material in col. 4 lines 1-2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the material of the friction means of *Friedmann et al.* to have included synthetic material, as taught by *Casse et al.*, in order to provide a particular coefficient of friction depending on the desired amount of relative movement and manufacturing factors such as material availability and cost.

Art Unit: 3683

17. Claim 15 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Friedmann et al. Friedmann et al. shows in figure 8 the friction means located over a projected portion of the piston to the same extent as Applicant. The reference is silent to the way in which the friction means is connected to the projecting portion, nevertheless, the patentability of this product-by-process claim is based on the product itself. Furthermore, since molding is an old and well-known method of producing a connection, burden shifts to Applicant to show an unobvious difference that would result from the claimed processes. See MPEP 2113.

18. Claims 16, 17, 18, 21, 22, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedmann et al. in view of Blomquist.

Re: claims 16, 17, 18. Blomquist teaches the use of snap-fitting means or lugs 80 being configured to snap fit in col. 3 lines 13-14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the connection between the piston and the friction means of Friedmann et al. to have included snap-fitting means, as taught by Blomquist, as an alternate means of connecting to elements together depending on manufacturing factors such as assembly and cost requirements.

Re: claims 21 and 22. The reference is silent to the way in which the friction means is connected to the projecting portion, nevertheless, the patentability of this product-by-process claim is based on the product itself. Furthermore, since molding is an old and well-known method of producing a connection, burden shifts to Applicant to

show an unobvious difference that would result from the claimed processes. See MPEP 2113.

Re: claim 23. Friedmann et al. show the friction means consisting of a ring or an encircling (surrounding) arrangement as shown by virtue of the hole through which the portion 451 passes.

Re: claim 24. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the ring or encircling arrangement to have included a plurality of sectors as opposed to one integral piece depending on such manufacturing factors as assembly and cost requirements. See *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

19. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Friedmann et al. Friedmann et al. teach the limitation of at least one projecting element or triangular-shaped wings or claws shown above and below the line associated with element number 451 on one of the friction means or the piston engaged in a complementary hole of the other one of the elements as shown in figure 8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the end of the friction means of Ross to have included at least one projecting element used to engage in the complementary hole on the piston, in view of the teachings of Friedmann et al., in order to provide a means of improving the retention of the two elements.

20. Claims 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Friedmann et al. as applied to claim 2 above, and further in view of

Art Unit: 3683

Blomquist. Blomquist teaches the use of snap-fitting means or lugs 80 being configured to snap fit in col. 3 lines 13-14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the connection between the piston and the friction means of Ross to have included snap-fitting means, as taught by Blomquist, as an alternate means of connecting to elements together depending on manufacturing factors such as assembly and cost requirements.

Allowable Subject Matter

21. Claims 25, 33, 34, 36-44 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

22. In order to complete the record, it should be noted that no conflict appears to presently exist between the subject matter defined by the instant claims and the subject matter of the claims of applicant's and/or assignee's copending application no.

09/806029 has been made of record. Accordingly, no double patenting rejection is entered into the instant application. See MPEP 804+ concerning double patenting type of rejections, if necessary. Applicant and/or assignee should maintain this clear line of patentable distinction between the instant claims and the claims of the indicated patent application.

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents: 3239037 to Croswhite et al. teaches the invention

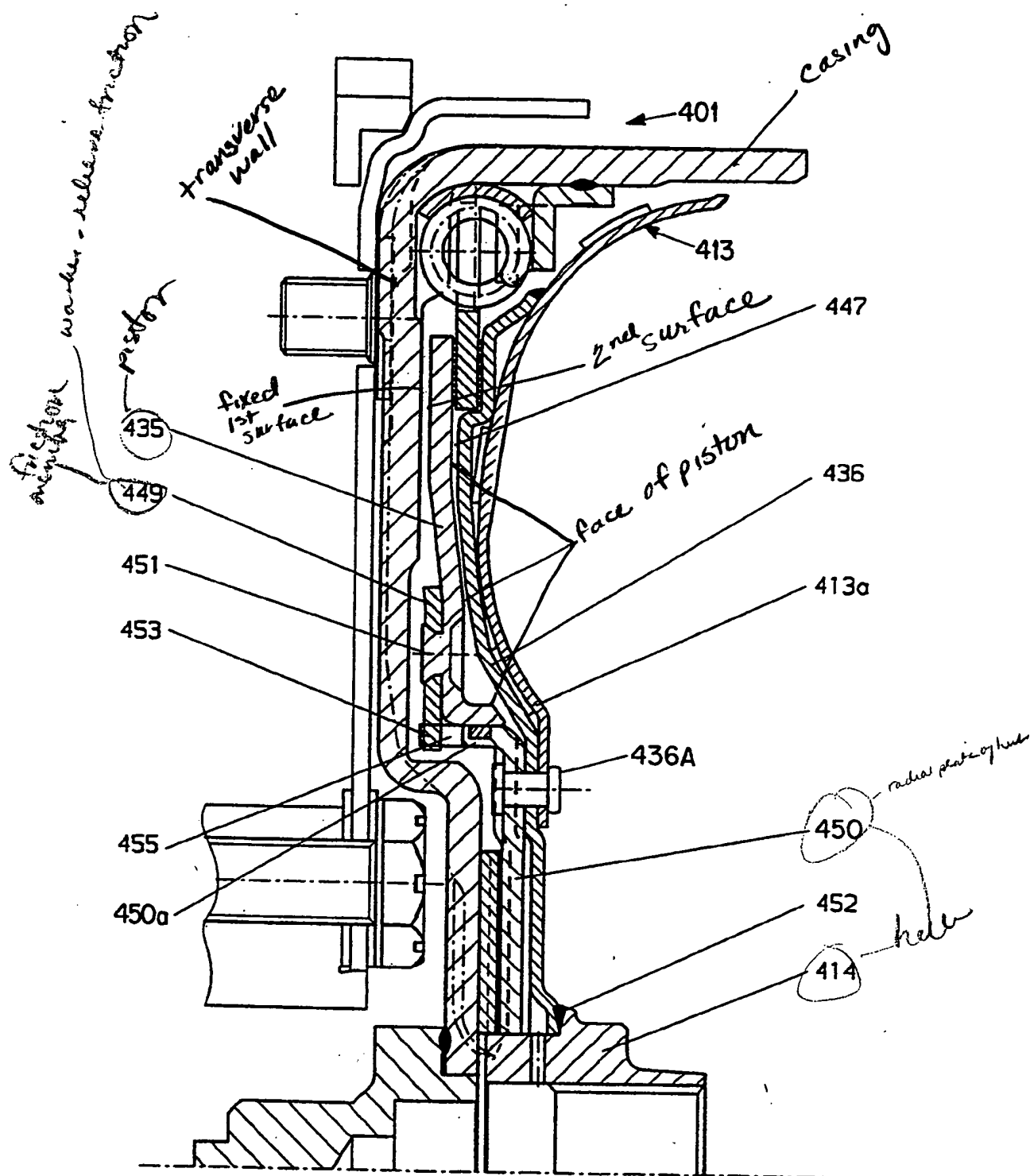


Fig. 8

Art Unit: 3683

substantially including a means 100 being carried on the piston 98 in figure 1 and includes the means having a passage shown in the area of element number 228 in figure 3, 4608883 to Bopp shows a friction means 92,96 being carried on the piston, 4926988 to Kundermann, 4194604 to Nichols et al., and 5462145 to Gimmler teach similar hydrokinetic coupling apparatus inventions.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb 5/1/02
mmb
May 1, 2002


JACK LAVINDER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3800
5/6/02